

Notice of Allowability	Application No.	Applicant(s)	
	10/667,572	WETLI, MARKUS	
	Examiner	Art Unit	
	Erica E Cadugan	3722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to dk1 033851-004, filed 9/23/2003.
2. ☒ The allowed claim(s) is/are 1-21.
3. ☒ The drawings filed on 23 September 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>9/23/03&2/4/04</u> 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____ |
|---|---|

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Alan Kopecki on January 10, 2005.

2. The application has been amended as follows:

On page 8, paragraph 0032 has been replaced with the following paragraph:

[0032] Thus, for example, there would be a plurality of the inserts 29b spaced apart in the circumferential direction of the disk portion 24. All of the inserts 29b (as well as the inserts 31b, 28b and 27) would be visible if the tool 15 were viewed in a direction parallel to the axis of rotation. The inserts are not seen in Fig. 3, because that figure merely shows the tool schematically without the inserts. Each of the inserts 29b has a circumferential edge 29b' for making a roughing cut, and [an axial] a radial or flank edge 29b" for making a finishing cut, as do all of the other inserts.

In claim 7, line 11, --second-- has been inserted prior to "tool".

Claim 12 (Currently Amended). A milling tool for milling a plurality of parallel walls in a workpiece comprising a plurality of disk milling cutters rotatable about a common axis; each disk milling cutter including a plurality of hard metal cutter inserts arranged in circumferentially spaced relationship, each insert defining a rough-cutting circumferential cutter edge portion and

Art Unit: 3722

a finish-cutting cutter [axial] radial edge portion, wherein the disk milling cutters simultaneously perform roughing and finishing cuts.

Note that support for the amendment to paragraph 0032 and to claim 12 is found in Figure 5.

3. The following is an examiner's statement of reasons for allowance:

DE 19942542 ('542) and U.S. Pat. No. 5,676,505 to Gauss et al. are representative of the closest prior art of record to the present invention as set forth in the independent claims 1, 11, and 12.

'542 teaches a method of using a milling cutter including a plurality of disk milling cutters on a common shaft 5 (see Figures 2-3) to machine a plurality of apparently parallel grooves in a workpiece. Note that the Derwent English Abstract teaches that the workpiece shown is a flywheel, and that the cutters are of particular use for "machining vehicle engine parts such as flywheels for drive trains".

'542 does not appear to teach that "first cutter edge portions" of the disk milling cutters perform a "rough cut" and that "second cutter edge portions" of the disk milling cutters "simultaneously" perform a "finishing cut" as set forth in independent claims 1 and 11, nor does '542 appear to teach that each milling cutter includes a "plurality of hard metal cutter inserts", "each insert defining a rough-cutting circumferential cutter edge portion and a finish-cutting cutter radial edge portion, wherein the disk milling cutters simultaneously perform roughing and finishing cuts" as set forth in independent claim 12.

Gauss teaches a single disk milling cutter wherein the cutter includes an insert 24 with a main cutting edge 33 (Figure 7) that performs a roughing operation, and also includes inserts 25

Art Unit: 3722

that include auxiliary or fine cutting edges 36 (Figure 7, col. 7, lines 58-62, for example) for simultaneously performing a finishing operation. Gauss explicitly teaches that the disk milling cutter is used for producing “deep grooves” such as “a groove in a rotor for a generator or turbine” (see abstract, for example).

However, Gauss explicitly teaches that a “single milling cutter” is utilized (col. 2, line 31, for example), and does not teach that the milling tool includes a “plurality of disk milling cutters rotatable about a common axis” as set forth in independent claim 12, nor that the milling tool has a “plurality of disk milling cutters disposed on common shaft as set forth in independent claims 1 and 11. Additionally, re claim 12, note that Gauss teaches separate inserts for roughing and cutting, and does not teach that “each insert” defines a “rough-cutting circumferential cutter edge portion and a finish-cutting cutter radial edge portion” as set forth in claim 12.

However, re a possible modification of ‘542 with the Gauss teachings (re claims 1 and 11), while noting that in both ‘542 and Gauss, the milling cutters are performing a grooving operation, it is also noted that the grooving operations are somewhat different. The Gauss grooving operation is explicitly described as being for producing “deep” grooves. As viewed in Figure 2 of ‘542, it does not appear that the grooves 2b that are produced are deep enough for the auxiliary fine cutting edges 36 of the cutter shown in Figure 7 of Gauss to operate. Even assuming arguendo that the grooves 2b of ‘542 were considered deep enough, for the auxiliary edges 36 of the Gauss cutter to be activated, the groove produced would have to have a different shape than that of the grooves 2b of the ‘542 patent. Specifically, note that cutting edges 36 of Gauss form sidewalls of a groove of a larger width than the sidewalls of the groove roughed-in by the main cutting edges 33 and 35 (see Figures 6-7). Thus, if a groove was machined by the

Art Unit: 3722

Gauss cutter that was deep enough for the auxiliary edges 36 to be active, the resultant groove would have a stepped shape, i.e., have a portion having a width equal to the spacing of the cutting edges 36, and also have a second portion having a narrower width equal to the resultant cutting edge width of the main cutting edges 35 and 33 (see Figures 6-7). Thus, it would not have been obvious to have substituted the specific disk cutter taught by Gauss for each of the generic disk cutters taught by '542, since the resultant cutter would not produce the workpiece desired by Gauss. If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). See also MPEP Section 2143.01.

Alternatively, re a possible modification of Gauss in view of '542 (re claims 1 and 11), it would not have been obvious to have provided multiple disk cutters on a common shaft or that were rotatable about a common axis as taught by '542 to the invention of Gauss. Note that Gauss explicitly teaches that a single cutter is used (col. 2, line 31, for example). Again, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). See also MPEP Section 2143.01.

Re claim 12, a combination of '542 and Gauss would still not have resulted in the claimed invention, since Gauss doesn't teach that "each insert" defines a "rough-cutting circumferential cutter edge portion and a finish-cutting cutter radial edge portion" as set forth in claim 12, as described above.

Art Unit: 3722

For at least the foregoing reasoning, the prior art of record neither anticipates nor renders obvious the present invention as set forth in the independent claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. For example, note that U.S. Pat. No.'s 4,537,538 and 5,158,400 both teach rotary disk cutters that include inserts for both roughing and cutting. However, the roughing and cutting occurs sequentially, and not "simultaneously" as claimed.

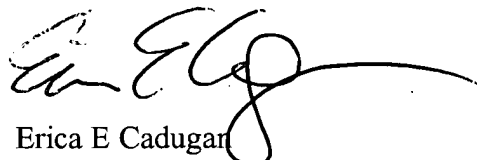
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erica E Cadugan whose telephone number is (571) 272-4474. The examiner can normally be reached on M-F, 7:30 a.m. to 5:00 p.m., alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea L. Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 3722

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Erica E Cadogan
Primary Examiner
Art Unit 3722

eec
January 10, 2005